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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/759,655 | 01/16/2004 | David Huang | EQUUS-105A | 8050 |

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Bruce B. Brunda
STETINA BRUNDA GARRED & BRUCKER
Suite 250
75 Enterprise
Aliso Viejo, CA 92656

| EXAMINER | |
|---|---|
| MILLER, CRAIG S | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2857 | |

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/759,655 | HUANG, DAVID | |
| | Examiner | Art Unit | |
| | Craig Miller | 2857 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/4/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The Examiner notes that claim 28 contains a typographic error, mistaking "225" for clearly intended -25-. The Examiner has examined the claims with this presumed pendency. Correction is required.

2. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*
>
> *Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.*

3. Claims 1-33 are rejected under 35 U.S.C. 103 as being unpatentable over any of Rother (6,615,120 B1), Eagleton *et al.* (6,725,137 B2) or Funkhouser *et al.* (6,807,469 B2).

The Examiner notes the following definitions of the word "*parse*":

Microsoft Press Computer Dictionary, Second Edition, *"To break input into smaller chunks so that a program can act upon the information..."*

online Houghton Mifflin Company, *"Computer Science. To analyze or separate (input, for example) into more easily processed components."*

online Computer Desktop Encyclopedia, *"To convert from one format to another. The term is often used as a substitute for the word 'convert' when continuous strings of text are scanned to find embedded format codes that must be changed. In contrast, when data are moved between different databases, that is generally known as database 'conversion,' because the locations of the fields in a database record are easily identified and generally do not have to be searched (scanned) to be found."*

Rother discloses the instant invention essentially as claimed, including possible receiving vehicle error codes from a database for manual selection by a user [51], processing the codes along with database information to correlate the error codes to applicable causes and related procedures [53], ranking applicable causes [55] and then performing tests from the list [58], but Rother does not specify that the error codes should be automatically extracted from the vehicle but rather is limited to manual entry of fault data. Funkhouser *et al.* discloses the instant invention essentially as claimed, including receiving error codes from the vehicle, processing the codes along with

database information to correlate the error codes to specific vehicle malfunction conditions, but Funkhouser *et al.* does not specify that the error codes are parsed into segments (fig. 4). Eagleton *et al.* discloses the instant invention essentially as claimed, including linking repairs to fault codes (fig. 6), linking at least one repair to a deferral (fig. 6) thus resulting in linking fault codes with at least one deferral (fig. 7), but Eagleton *et al.* does not specify that the error codes are parsed into segments. The Examiner notes that it is well known to automate that which was generally known as being performed manually, In re Venner, 120 USPQ 192 (CCPA 1958), In re Rundell, 18 CCPA 1290, 48 F.2d 958, 9 USPQ 220, "*...it is well settled that it is not 'invention' to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result.*", therefore, because automated vehicle fault code retrieval is well known within the art of vehicle diagnostics, because it is known in general to automate known manual processes and because Rother discloses manual fault code entry, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within the device of Rother such automated code retrieval in place of the disclosed code entry of Rother, each performing similar functions in similar ways and so as to receive the expected benefits derived there from such as enhanced system speed and reliability absent a showing of unexpected results or synergistic effect from any particular claimed combination. Funkhouser *et al.* discloses in col. 4 starting in line 53, "This database must contain information about vehicular error codes, and be capable of correlating these error codes with the malfunction to which they relate." and Eagleton *et.al.* illustrates in fig. 1 that fault codes [113] relate to a repair requirement. The Examiner notes that Funkhouser *et al.* and Eagleton *et al.* clearly contemplate that single malfunctions may be correlated from plural codes, thus suggesting a code composition and therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within either of the devices of Funkhouser *et al.* or Eagleton *et al.*, such known code correlation so as to receive the expected benefits derived there from such as enhanced system flexibility absent a showing of unexpected results or synergistic effect from any particular claimed combination.

More particularly with respect to claims 9-12, said claims are directed towards automatic identification of the type of vehicle under test. Funkhouser *et al.* discloses in col. 13 that the

vehicle identification data should be entered into the code processing computer and Rother illustrates in fig. 2 the selection of the vehicle under test. Eagleton *et al.* clearly inherently requires the vehicle data to correctly perform its intended function but Eagleton *et al.* is silent on how the data is obtained. Because the devices of Eagleton *et al.*, Rother and Funkhouser *et al.* each either manually enter or clearly require entry of vehicle identification data and because network node automatic identification is well known within the art of networked sensor systems and because it is known in general to automate known manual processes, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within any of the devices of Eagleton *et al.*, Rother and Funkhouser *et al.* such automated node identification so as to receive the expected benefits derived there from such as enhanced system identification accuracy absent a showing of unexpected results or synergistic effect from any particular claimed combination.

More particularly with respect to claims 15, 17-19, 22-24, 26-28 and 30-33, said claims are directed towards the use of known memory type for storing source data and/or processed results. Rother discloses data storage within RAM, ROM, hardrives and other known data storage units, Eagleton *et al.* discloses non-specific data storage [113] (see the top of column 3) and Funkhouser *et al.* discloses assorted memory including optional flash memory. Because the claimed memories are well known within the art of process control and because each of the devices of Eagleton *et al.*, Rother and Funkhouser *et al.* disclose or require data storage, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within any of the devices of Eagleton *et al.*, Rother and Funkhouser *et al.* such known memories in place of their disclosed or required memory, each performing similar functions in similar ways, so as to receive the expected benefits derived there from such as enhanced system flexibility and reliability to power failure absent a showing of unexpected results or synergistic effect from any particular claimed combination.

4. The prior art made of record but not relied upon is deemed pertinent to applicant's disclosure.

Phung *et al.* (U.S. Prepub. 2002/0007237 A1) discloses vehicle fault diagnosis.
Andreasen *et al.* (6,687,584 B2) discloses a fault code reader.
Bird *et al.* (5,631,831) discloses artificial intelligence within vehicle fault diagnosis systems.
Schmidt *et al.* (6,122,575) discloses in fig. 7 the translation of system fault codes.

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Craig Steven Miller whose telephone number is (571) 272-2219. Central facsimile services are now available at (703) 872-9306.

The Examiner can normally be reached on Mondays through Thursdays from 6:40am-2:10pm EDT. Should repeated attempts to reach the Examiner be unsuccessful, the Examiner's Supervisor, Marc Hoff may be reached at (571) 272-2216.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Private PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Craig Steven Miller (ss)
18 August 2005

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800